**RESEARCH PLAN (DRAFT)**

**How Can Technology Support the Teaching of Visual Literacy to Students?**

**Pat Auger**

**University of West Georgia**

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**Topic Overview**

Our first reading experience is with pictures, but once we learn how to read words, deciphering visuals becomes a thing of the past. Today, students of all ages are constantly surrounded by pictures designed to influence their choices and thought processes. Much of what our students identify as normal is derived from images and the ones they see are frequently central to what they think and how they relate to the world around them. Television, film and advertisements teach them about the world, but often provide an unrealistic value system. Appropriate dress, conversation, behavior, relationships and knowledge constructs are often dictated by commercial entities. They have been passive recipients of a vast quantity of visual representations without the benefit of critical review (Burns, 16). However, visual literacy is a skill that can be learned in order to better understand these messages and communicate their own ideas.

Visual literacy can be simply defined as a person's ability to understand and produce information visually (Riesland, 2). Learning to read an image involves acquiring the knowledge and skills necessary to interpret that information. It is the beginning of becoming visually intelligent and is a basis for critical thinking. Students need to begin asking questions about images they see, such as: "What am I viewing? What meaning does it have for me? Does the text and picture convey a message?"

The influx of multimedia technologies has brought new challenges to teachers also. There is now a need to provide instruction for students about how to ‘read’ the images that surrounds them as well as learning how to design and communicate their own ideas. This is new territory for many teachers as well as students. We all need to be trained to view images critically and reflectively. As teachers are trained to examine images for their content and message, they will then be able to teach their students to do the same. There are a number of opportunities to use technology to support the teaching of visual literacies in the classroom.

A picture is more precise than words and it can provide better communication and learning. Additionally, viewer enjoyment, comprehension and retention are increased when visuals are used in a product. The use of images with lessons will improve articulation and writing skills also. Reading and writing combined with images can be used to help students tap into their own thoughts and creativity in order to better demonstrate the lessons they have learned.

**Literature Review**

**Abstract**

*The value of teaching visual literacy to students is reflected in numerous papers in educational literature reporting an increase in comprehension and critical thinking. Being visually literate is having the ability to interpret images, analyze the elements and values of the message and then apply those principles to produce information. This paper provides an introduction to the subject, instructional strategies for implementation and methods of using technology to support the teaching of visual literacy in the classroom.*

**Introduction**

In our visual culture, we are being continually bombarded by images, yet our comprehension of the true messages and influences of those images remains rudimentary. The phrase, “a picture is worth a thousand words”, is often used to support the premise that images are invaluable in conveying a message. Teaching students how to read an image, interpret the message and its implications are all elements of learning how to be visually literate (Millum, 2009). The common theme of these articles, as noted by Riesland (2005), is the belief that for students to benefit most from the classroom experience, they must be visually literate. Australia has mandated that visual literacy be included in their curriculum; students need to be conversant in the concepts and language (metalanguage) that helps them communicate regarding images and text (Callow, 2008). As a society, we communicate with images virtually and in actuality. However, at this time, there is little or no classroom instruction for students to understand the messages of pictures or how to communicate effectively in a multimedia framework. A number of instructional strategies, techniques and examples are offered by these authors to integrate visual literacy skills into curriculum including the use of technology as a tool for implementation.

**Definition and Use**

Visual literacy is a multi-dimensional field of study and as such, has many definitions and goals. Basically, it is a person’s ability to read and understand images and to use them to communicate effectively; it is a competency that can be learned and developed with training. Being able to decode meaning from pictures is as important as learning to read text. Pictures offer a precise meaning and can be used alone to offer instruction or paired with print for a more complete understanding of a subject (Burns, 2006). Roland Barthes (as cited in Millum, 2009, p. 3), believes that each visual comes with one or more of three messages: linguistic, literal opposed to symbolize and connotation or interpretation. Analyzing images using these guidelines can aid students as they begin to study images and their meaning.

Expanding on the sole use of pictures, Gillenwater uses the symbiotic relationship within graphic novels to combat what he terms “print illiteracy” (2009). This format is multimodal, merging text and image to communicate a story and provide a broader learning experience. For the reader to gain a complete understanding of the story, he must merge the two components. This dual coding is suggested to be a better form of teaching reading comprehension to students. For example, a holocaust victim may be visualized differently by each student in a classroom when the book, *Night*, is read to them, but the photograph of a victim offers definition and clarity.

Although many students know how to create multimedia presentations, most have very little training in the use of tools for creating effective images. The use of good design principles in the classroom will awaken students to the power of visual elements in their products. T. Sosa (2009), a college professor of design, includes the proper use of fonts, layout, balance, displays of word art and other images, color use and appropriate spacing in her lessons. Her article also features examples of good versus poor design, visual awareness and in-depth design principles to create a practical resource for teachers. The rubric is devised to give equal weight to specific design requirements and technological skills. Jefferies (2007), a British educator is also involved in the area of design and the use of screen-based mediums. Her goal was to determine if design students were being taught using the most appropriate visual literacy training for their chosen digital medium. She notes that the use of screen based multimedia tools (as opposed to physical tools) are creating the demand for a new visual skill set. These developments will necessitate the formation of diverse teaching methods that are able to meet the needs of both student learning styles and ever changing communication modes.

Similarly, training is needed in decoding the meaning behind images and symbols used by advertisers to persuade their audience to change a behavior or buy a product. Chung (2005) has created the “AdDeconstruct Project” to teach students how to analyze (cigarette) ads in terms of their overt and perceived messages. Through writing and dialog meetings, they learn to critically view how they are targeted as consumers. Their final project, using Photoshop, is to redesign the ad and present it to the public. Projects such as these help students learn to ‘read’ what advertisers are saying to them and ask important questions (Riesland).

Images used in advertising can also influence teens in how they perceive themselves and construct a basis for their actions. Zambo (2009) maintains that adolescents are vulnerable to inaccurate world views and life experiences as portrayed in images. Her work with students with physical disabilities and the use of visual literacy lessons is designed to encourage them to change their misconceptions. She notes that photographs are “rarely neutral or devoid of social, cultural or political context” and are a key part of a teen’s world (p. 64). Students are led to participate in critical thinking and emotional reflection exercises based on photographs and ad campaigns that are a key part of their world.

**Technology Integration**

A number of technologies can be utilized to support the instruction of visual literacy. One of the most accessible and student-friendly technologies available for teaching visual literacy is photography. Both Abrahmov (2008), and Palmquist (2008) teach photography because they believe strongly in its value in society as a social and cultural medium. They did however see a need for educating their students in reading and constructing photos in order to more effectively convey a message. Observations, personal responses and evaluations were an ongoing part of both classes. Palmquist used the ad campaigns (such as Dove’s Real Beauty), photo studies and practical tips for using a camera to engage her students and assess critical thinking skills and understanding. Each class member participated in a display of their photos providing measurable results, demonstrating student improvement and how well the theories of visual literacy were combined with the practical aspects of photography.

Trisha Long (2008) created Full Circling, a process to teach history using visual tools. Students are guided through a series of interactions with visuals and then become actively involved by means of their response. Her aim is to have students not only involved intellectually with the subject matter, but also emotionally. Her research has shown that seeing pictures relating to a specific time period or event bring a new dimension to class discussions, encouraging critical thinking and deeper involvement with the lesson. She discovered that as students are invited to become involved with the people they are studying, they will respond with more passion and conviction. This connection will result in more writing and reading on the part of the student. At the end of the study, Long requires a plan of action from the students to convey their understanding and response to ethical conflicts in the lesson. They created diaries, stories, plays, musicals and even a tableau of live actors – all designed to convey what they have internalized from the text and image presented.

Visual tools used with various technologies have been a successful component in Flannery’s (2006) experience teaching biology students. In her article, she divides the available resources for biology teachers into a low-tech or high-tech category. Blogs, digital pictures and video streaming are examples of high-tech tools that are readily available online. For example, teachers can present lessons on genetics using graphics, 2-D and 3-D representations or even a visual environment demonstrating features that words alone could not explain. Low-tech aids can include tables, graphs or charts which still have a valuable place in portraying information. Because the brain stores information in an organized framework consisting of relationships, it is easy to understand and remember maps, timelines and charts (Svinicki as cited in Flannery, p. 301, 2006). One important visual aid that is frequently overlooked as being too simplistic is the tree. When the meaning of the lines and connections is explained, it can be a powerful tool for both teachers and students. Flannery concludes that each visual device has a place in learning and can be used effectively to facilitate student comprehension.

Another exciting technology to use with students is film. In this case, it is the presentation of movies used to engage students in meaningful dialog and encourage them to interact with relevant current issues. In his book, *Teaching Social Issues with Film (2009),* Dr. William Russell created a practical tool utilizing movies to address social issues. The films and subjects are geared toward Social Studies’ classes, but many could be effectively used in a number of other classes. Using the Russell Model for Film, a teacher will benefit from the questions and suggestions it offers to guide students through a film viewing. The book provides a detailed list of 180 films categorized within 30 different social subjects. A brief synopsis of the film is given and the topic is defined. Film used as the visual starting point of discussion can be instructionally beneficial in many areas: students become wise consumers of media, critical thinking is learned and internalized, proficiency in communication skills increases and students learn how to analyze any image or message.

**Conclusion**

In the educational arena, textbooks, software and multimedia presentations for students are utilizing more visual elements than ever. Strategies and techniques are available to teachers desiring to incorporate visual literacy into their curriculum. This literature concludes that visual literacy is a skill that encourages critical, analytical thinking as well as improved ability in creating and communicating messages, both visual and written. It supports a model of visual literacy comprised of multiple dimensions, each being a field of research within itself, and each contributing to the individual’s global ability to interpret images accurately. Educators will enhance their communication with students by becoming more proficient in using available technologies for visual instruction that recognizes these principles of visual literacy. Likewise, students themselves will learn more efficiently as they also become proficient in reading visual images embedded in instructional materials and communicating through multimedia tools.

**Research Problem**

How can technology support the teaching of visual literacy to students? Students need instruction in how to process pictures and graphics critically and reflectively. A number of strategies and techniques are available to teachers wanting to incorporate visual training into their lessons. Because visual literacy is a skill that can be learned and internalized, teachers can easily utilize a variety of available materials and technologies. Educators will enhance their communication with their students using visual literacy tools and technologies that support it. Students will increase their comprehension and critical thinking skills and be able to more effectively create products that reflect visual literacy principles.

**Research Methodology**

The approach that I intend to take at this point will be a qualitative study composed of data relating personal experiences, interviews and case studies from available literature. The subject of visual literacy applies itself to a grounded theory because of its understanding and generality (Johnson & Christensen, 411). My study was going to be geared to high schoolers, but because of the available research, I am going to expand it to include 7 - 12th graders. A well designed curriculum for visual literacy can be used in every discipline in a school.   
  
The research has consisted primarily of case studies and narratives. The qualitative research seems to be the most useful in helping me determine the best way to create an effective resource for both teachers and students to understand visual literacy and use it in their daily lives. There are consistent reports showing how the social aspects of our student's lives are critical in shaping their reality (Merriman, p. 5). I believe that this research will be valuable in teaching them how to think critically and reflectively.  
My approach to this research has changed somewhat from the beginning. The information I have gathered and comments from classmates and Dr. B. have led to me realize that researching visual literacy (VL) will be qualitative and investigative. I am researching practices that have been successful and can be replicated in 7-12 grade classrooms. Many of the lessons I envision would involve deconstructing advertisements, reading photographs and utilizing VL techniques to improve communication. Only one article I have read to date, provides any quantitative data. The results I anticipate gathering from students who had received instruction in using VL techniques would be obtained in primarily three ways. Qualitative interviews in an informal, conversational style would be the primary method of obtaining a student’s feelings and interpretations following instruction. The questions are often open-ended and are part of the lesson. It would be important to have a relationship of trust and rapport with the students so that they would share about their emotional responses and thought processes relative to an image (Johnson & Christensen, 207). Focus groups would be an alternative to individual interviews and may be more suitable with certain groups. Naturalistic observation will also be used with a number of lessons where group activities are taking place and I would be listening to student interactions or viewing student products (photos, power points, etc.). Rubrics will be helpful assessment tools, and it may be appropriate to use surveys or questionnaires at some point, but I would anticipate that these would not be used very often. In my understanding and vision of VL integration, it is (by its’ very nature) about personal and emotional responses to images and discussing reactions to them. The qualitative data gathered from successful visual literacy lessons will be provided by student projects, narratives and personal accounts.

**Types of Data & Collection Instrument**

Because I anticipate co- teaching about visual literacy within a variety of lessons and disciplines, I am going to use assessment tools that may or may not be used according to the teacher's discretion and arrangement of the presentation.  I am creating a teacher survey to be given at the beginning of the semester. This will help me determine their opinions and knowledge of visual literacy as well as how interested they are in having it incorporated into one or more of their lessons.  Secondly, I am going to create a pre and post test about reading images for students that can be administered if it is suitable for the lesson.  There will be two assessment tools.  One is for observation of students as they work with images and the second will be a rubric for those classes that will be creating a product using the visual principles we have taught.

Johnson & Christensen (2009) describe qualitative data as including observations, interviews with people about their opinions and experiences and document review (p. 393).  I have included the data collection tools in order to provide  solid feedback about how effective the instruction is and if we are meeting the standards for the chosen lesson.

**Data Analysis**

The holistic perspective as described by Johnson & Christensen  presents key points in my expected analysis of the data that I gather.  This qualitative research will "focus on complex interdependencies and system dynamics that cannot meaningfully be reduced to a few discrete variables and linear, cause and effect relationships" (p. 393).

I will be offering a variety of assessment tools to be used when appropriate for the class.   There will be a survey for teachers, pre and post-tests for students and a rubric specific to the class that is being taught (VoiceThread, photography, etc.).

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| **Visual Literacy Lesson Timeline** | |
| Proposed Dates | Tasks |
| January 24 – 28 | Survey Teachers |
| January 31 – February 4 | Compile Results  Assess Needs  Design Approach |
| February 7 – 18 | Contact Interested Teachers  Collaborate on Lesson(s)  Schedule Class visit(s)  Prepare Materials for each class |
| February 28- March 25 | Co-teach Classes  Collect Data from students (pre/post tests, assessments, observations and/or products) |
| March 28 | Analyze and compile results |
| April 11 | Share results with staff and administration |
| Ongoing | Compiling resources (online & print) as teacher visual literacy toolkit |

**References**

 Abrahmov, S., & Ronen, M. (2008). Double blending: online theory with on-campus practice in photography instruction. *Innovations in Education and Teaching International, 45(1),* 3-14. Retrieved from Research Library. (Document ID: 1480083451).  
  
Avgerinou, M. (2009). Re-viewing visual literacy in the “bain d’ images” era. *TechTrends, (53)*, 2, 28-34. Retrieved from Ebsco Host.  
  
Burmark, L. (2002). *Visual Literacy: Learn to See, See to Learn.* Alexandria, VA: Association for Supervision and Curriculum Development.  
  
Burns, M. (2006). A Thousand Words: Promoting Teachers’ Visual Literacy Skills. *MultiMedia & Internet Schools, 13(1),* 16-20. Retrieved from EBSCO database at: <http://ts.isil.westga.edu/login?url=http>:*search.ebscohost.com/login.aspx?direct=true&db=a9h&AN=19571550&site=ehost-live*  
  
Callow, J. (2008). Show me: principles for assessing students’ visual literacy. *The Reading Teacher, 61(8),* 616-620, 622-626. Retrieved from Research Library. (Document ID: 1474543421).  
  
Chung, S.K. (2005). Media/Visual Literacy Art Education: Cigarette Ad Deconstruction. *Art Education. 58(3).* 19-25. Retrieved from ProQuest database.  
  
Gillenwater, C., (2009). Lost literacy: how graphic novels can recover visual literacy in the literacy classroom. *Afterimage, 37(2),* 33-36. Retrieved from Academic Search Complete.  
  
Johnson, B. & Christensen, L. (2008). *Educational Research: quantitative, qualitative, and mixed approaches*. Thousand Oaks: Sage Publications, Inc.  
  
Long, T., (2008). The full circling process: Leaping into the ethics of history using critical visual literacy and arts-based activism. *Journal of Adolescent & Adult Literacy, 51(60),* 498-508. Retrieved from Research Library. (Document ID: 1442013881).  
  
Merriman, S. (2002) Introduction to Qualitative Research. Jossey-Bass, Inc.  
  
Millum, T. (2009) Making sense of pictures: a beginner’s guide to teaching visual images. *English Drama Media 14*, 37-42.  
  
Riesland, E. (2005). Visual literacy and the classroom. New Horizons for Learning, Spring, 2005. Retrieved from: <http://www.newhorizons.org/strategies/literacy/riesland.htm>  
  
Sosa, T. (2009). Visual Literacy: The Missing Piece of Your Technology Integration Course. *Tech Trends*, 53(2). 55-58. Retrieved from EBSCO database.  
  
Zambo, D. (2009). Using visual literacy to help adolescents understand how images influence their lives. *Teaching Exceptional Children 41(6),* 60-67. Retrieved from EBSCO database.